



Construction Reactor Oversight Process Development

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cROP Development

- **The NRC cROP WG's interaction with the NEI cROP Task Force and other stakeholders has resulted in substantive agreement on the following:**
 - **Issue Screening**
 - **cROP framework, including cornerstone objectives, attributes, and areas to measure**
 - **Two Significance Determination Process Approaches**
 - **Risk Matrix and Flowchart (details still need to be developed)**

cROP Development

- **Issue Screening**
 - **Inspection Manual Chapter (IMC) 0613 provides issue screening guidance**
 - **cROP WG will recommend to modify the issue screening process by incorporating applicable portions of the IMC 0612 approach for operating reactors**
 - **Recommendations will include the use of the terms ‘issue of concern’ and ‘performance deficiencies’ and the use of the traditional enforcement screening tool**

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Draft Significance Determination Process Matrix

| | | | | |
|----------------------------------|----------------|--------------------------|--------------------|-------------------------|
| Degree of Non-Conformance | High | White | Yellow | Red |
| | Medium | Green | White | Yellow |
| | Low | Green | Green | White |
| | Minimal | Green | Green | Green |
| | | Insignificant | Significant | Very Significant |
| | | Risk Significance | | |

Degree of Non-conformance

- Evaluate the finding using the following factors
 - Quality of Construction
 - Extent of Onsite Review Prior to Identification
 - Corrective Actions

Degree of Non-conformance

Quality of Construction

3 points

- Major repairs, replacement or rework needed to meet AC
- Reanalysis involving reduction of margin to design limits
- Failure on retest or re-inspection due to same failure mode

2 points

- Limited repair, replacement or rework needed to meet AC
- Reanalysis needed to meet AC
- Acceptable on retest or re-inspection

1 point

- No repair, replacement or rework needed to meet AC
- Program or process corrective actions sufficient

Degree of Non-conformance

Extent of Onsite Review Prior to Identification

3 points

- ITAAC Closure Letter Submitted to NRC
- ITAAC acceptance criteria reviewed and accepted by 1st line QA/QC

2 points

- Turned over for ITAAC testing or pre-op testing
- In process work has been completed to determine AC met

1 point

- Identified during fabrication, installation, or QC phase
- Fabrication/QC test completed successfully

Degree of Non-conformance

Corrective Actions

3 points

- Recurrence of similar significant problem due to ineffective corrective actions
- Recurrence of SCAQ due to ineffective corrective actions

2 points

- Untimely corrective actions for similar problem
- Recurrence of a similar, less significant problem
- Problem caused by repetitive personnel error

1 point

- Problem not previously identified
- Problem identified by planned tests, inspections, or reviews

Degree of Non-conformance

Determination of Degree of Non-conformance

Summary of points

High: 9 points

Medium: 7 - 8 points

Low: 5 - 6 Points

Minimal: 4 points or less

Risk Significance

- Very Significant
 - Finding associated with targeted ITAAC in a risk significant system
- Significant
 - Finding associated with remaining targeted ITAAC
- Insignificant
 - All other applicable findings

Risk Significant System

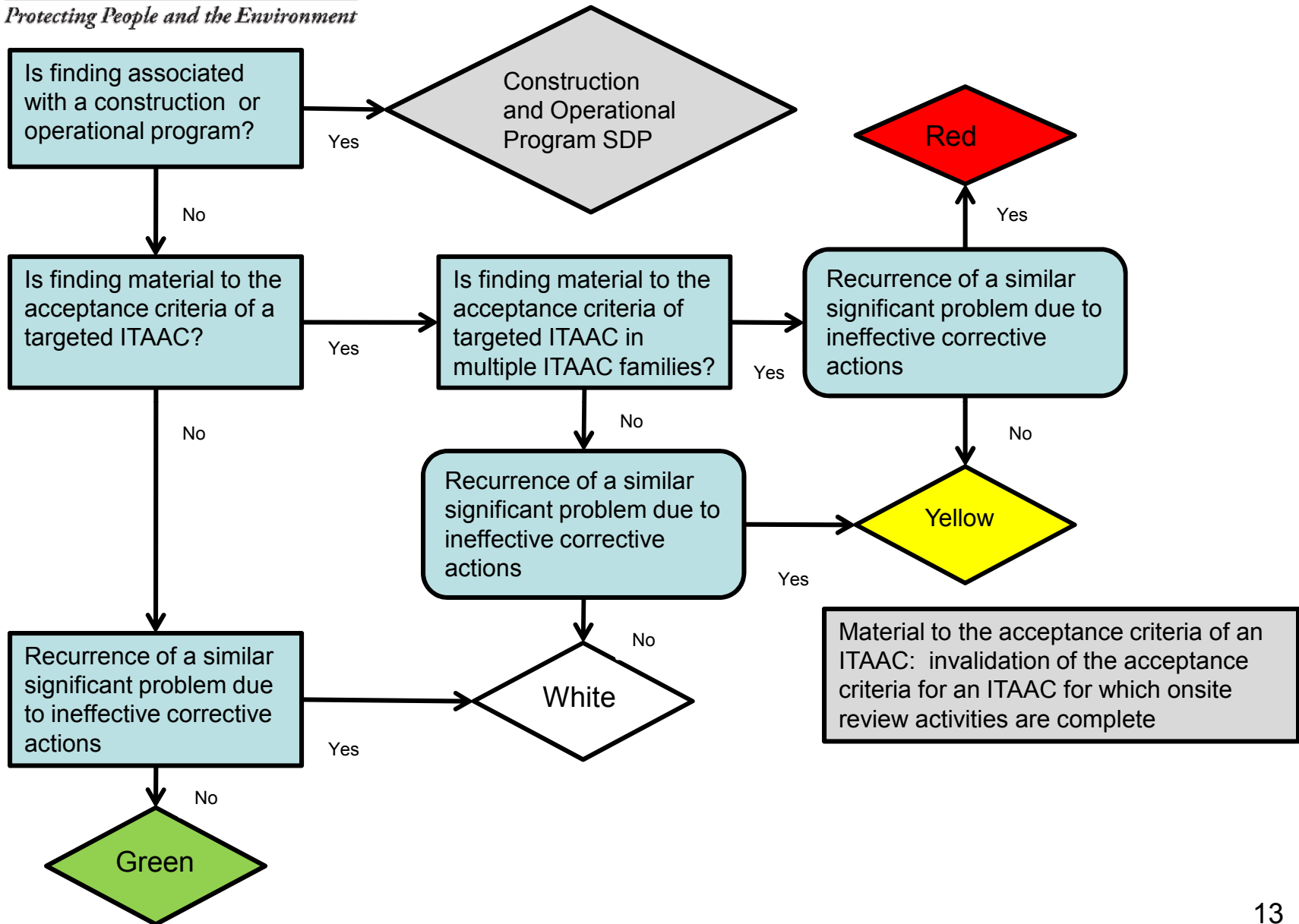
- To be determined for each design based on Fussel-Vessely and Risk Achievement Worth Values
- Possible Systems for AP1000
 - PMS (Protection and Safety Monitoring System)
 - DC (DC Power)
 - IRWST (In Containment Refueling Water Storage Tank)
 - CMT (Core Makeup Tank)
 - ACC (Accumulators)

cROP Development

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Draft Construction SDP Flow Chart



cROP Development

- IMC 2505 Provides Construction Assessment Program Guidance including Construction Action Matrix
- cROP Working Group Will Recommend Some Changes to Construction Assessment Program
 - **Continuous assessment of all inspection results, including inspections conducted of applicants**
 - **Implementation of formal, semi-annual assessment program upon issuance of license and initiation of sufficient activities such that a formal assessment would be meaningful**

cROP Development

- Next Steps
 - Performance Indicator Approach
 - Construction Action Matrix Inputs
 - Safety Culture Approach
 - Assessment Program Evaluation
 - Transition to ROP

cROP Development

- Federal Register Notice Issued on June 24 Requesting Feedback on cROP Development
- Category II Meeting With NEI cROP Task Force on July 14 and August 5
- Internal White Paper With Working Group Recommendations August 6
- Category III Meeting on August 19
- Notation Vote SECY Paper Issued By October 29
- Commission Meeting December 9